

Evaluation Report for Category B, Subcategory B.1.3 Application

Application Number: 2012-3907
Application: Changes to technical chemistry; specifications
Product: Spirotetramat Technical Insecticide
Registration Number: 28952
Active ingredients (a.i.): Spirotetramat (SPA)
PMRA Document Number: 2284974

Purpose of Application

The purpose of this application was to update the specifications and the guarantee for Spirotetramat Technical Insecticide, which is used to formulate the end-use products Kontos Insecticide (registration number 29567) for control of aphids on greenhouse lettuce, and Movento 240 SC Insecticide (registration number 28953) and Movento 150 OD Insecticide (registration number 28954) for control of insects on fruit, vegetable and field crops.

Applications to amend the specifications of the end-use products were received concurrently.

Chemistry Assessment

Common Name: Spirotetramat
 Chemical Name:
 IUPAC ; *cis*-4-(ethoxycarbonyloxy)-8-methoxy-3-(2,5-xylyl)-1-azaspiro[4.5]dec-3-en-2-one
 CAS: *cis*-3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-azaspiro[4.5]dec-3-en-4-yl ethyl carbonate

Spirotetramat Technical Insecticide has the following properties:

Property	Result
Colour and physical state	White powder
Nominal concentration	97.82%
Odour	No characteristic odour
Specific gravity	1.22
Vapour pressure	5.6×10^{-9} Pa at 20°C
pH	6.3

Property	Result		
Solubility in water	<u>pH</u>	<u>Solubility (mg/L)</u>	
	4	33.5	
	7	29.9	
	9	19.1	
n-Octanol/water partition coefficient	<u>pH</u>	<u>log Kow</u>	<u>Kow</u>
	4	2.51	324
	7	2.51	324
	9	2.50	316

The chemistry requirements for Spirotetramat Technical Insecticide have been completed.

Health Assessments

The updates made to the product specifications of Spirotetramat Technical Insecticide are not expected to alter the toxicological profile of this compound beyond what has been previously reviewed.

Environmental and Value Assessments

Environmental and value assessments were not required for this application.

Conclusion

The changes to the technical product chemical specifications were found to be acceptable for continued registration.

References

PMRA

Document

Number

Reference

- | | |
|---------|---|
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| 2089042 | 2011, Spirotetramat (BYI 08330) technical grade active substance - Discussion of the formation of impurities, DACO: 2.11.4 CBI |
| 2120441 | 2011, Validation of AM001104MP1 Spirotetramat (BYi 08330) Assay of technical grade active ingredient HPLC - external standard, DACO: 2.13.1 CBI |
| 2120442 | 2011, Validation of AM001204MP2 - Spirotetramat by-products in technical grade active substance HPLC - external standard, DACO: 2.13.1 CBI |
| 2120443 | 2011, Spirotetramat - Determination of [CBI removed] in Spirotetramat GLC - external standard (Headspace), DACO: 2.13.1 CBI |
| 2225970 | 2011, Validation of GLC-method AM011011MP1 - Determination of [CBI removed] in Spirotetramat GLC - external standard (Headspace), DACO: 2.13.1 CBI |
| 2225971 | 2006, Spirotetramat By-products in technical grade active substance HPLC-external standard, DACO: 2.13.1 CBI |
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